CLAIMS

What is claimed is:

1. An isolated polypeptide that ameliorates a symptom of atherosclerosis or other pathology associated with an inflammatory response, said polypeptide comprising an amphipathic helical peptide having charged residues on the polar face of the peptide and possessing a wide non-polar face.

2. The polypeptide of claim 1, wherein said peptide is at least 10 amino acids in length.

3. The polypeptide of claim 2, wherein said peptide is about 40 or fewer peptides in length.

4. The polypeptide of claim 2, wherein said peptide comprises a G* amphipathic helix.

5. The polypeptide of claim 4, wherein said peptide shows greater than about 50% sequence identity with apo J.

6. The polypeptide of claim 2, wherein said peptide protects a phospholipid against oxidation by an oxidizing agent.

7. The polypeptide of claim 2, wherein said peptide comprises an amino acid sequence selected from the group consisting of LLEQLNEQFNWVSRLANLTQGE, (SEQ ID NO:1), LLEQLNEQFNWVSRLANL, (SEQ ID NO:2), NELQEMSNQGSKYVNKEIQNAVNGV, (SEQ ID NO:3), IQNAVNGVKQIKTLIEKTNEE, (SEQ ID NO:4), RKTLLSNLEEAKKKKEDALNETRESETKLKEL, (SEQ ID NO:5), PGVCNETMMALWEECK, (SEQ ID NO:6), PCLKQTCMKFYARVCR, (SEQ ID NO:7), ECKPCLKQTCMKFYARVCR, (SEQ ID NO:8), LVGRQLEEFL, (SEQ ID NO:9), MNGDRIDSLLEN, (SEQ ID NO:10), QQTHMLDVMQD, (SEQ ID NO:11), FSRASSIIDELFQD, (SEQ ID NO:12), PFLEMIHEAQQAMDI, (SEQ ID NO:13), PTEFIREGDDD, (SEQ ID NO:14), RMKDQCDKCREILSV, (SEQ ID NO:15), PSQAKLRRELDESLQVAERLTRKYNELLKSYQ, (SEQ ID NO:16),

LLEQLNEQFNWVSRLANLTEGE (SEQ ID NO:17), DQYYLRVTTVA, (SEQ ID NO:18), PSGVTEVVVKLFDS, (SEQ ID NO:19), PKFMETVAEKALQEYRKKHRE, (SEQ ID NO:20), WDRVKDLATVYVDVLKDSGRDYVSQF (SEQ ID NO:21), VATVMWDYFSQLSNNAKEAVEHLQK (SEQ ID NO:22), RWELALGRFWDYLRWVQTLSEQVQEEL (SEQ ID NO:23), LSSQVTQELRALMDETMKELKELKAYKSELEEQLT (SEQ ID NO:24), ARLSKELQAAQARLGADMEDVCGRLV (SEQ ID NO:25), VRLASHLRKLRKRLLRDADDLQKRLA (SEQ ID NO:26), PLVEDMQRQWAGLVEKVQA (SEQ ID NO:27), MSTYTGIFTDQVLSVLK (SEQ ID NO:28), and LLSFMQGYMKHATKTAKDALSS (SEQ ID NO:29).

8. The polypeptide of claim 7, wherein said peptide is a concatamer of two or more of said amino acid sequences.

9. The polypeptide of claim 2, wherein said peptide further comprises a protecting group.

10. The polypeptide of claim 2, wherein said peptide further comprises a protecting group coupled to the amino or carboxyl terminus.

11. The polypeptide of claim 9, wherein said protecting group is a protecting group selected from the group consisting of acetyl, amide, 3 to 20 carbon alkyl groups, Fmoc, *t*-boc, 9-fluoreneacetyl group, 1-fluorenecarboxylic group, 9-florenecarboxylic group, 9-fluorenone-1-carboxylic group, benzyloxycarbonyl, Xanthyl (Xan), Trityl (Trt), 4-methyltrityl (Mtt), 4-methoxytrityl (Mmt), 4-methoxy-2,3,6-trimethyl-benzenesulphonyl (Mtr), Mesitylene-2-sulphonyl (Mts), 4,4=-dimethoxybenzhydryl (Mbh),Tosyl (Tos), 2,2,5,7,8-pentamethyl chroman-6-sulphonyl (Pmc), 4-methylbenzyl (MeBzl), 4-methoxybenzyl (MeOBzl), Benzyloxy (BzlO), Benzyl (Bzl), Benzoyl (Bz), 3-nitro-2-pyridinesulphenyl (Npys), 1-(4,4-dimentyl-2,6-diaxocyclohexylidene)ethyl (Dde), 2,6-dichlorobenzyl (2,6-DiCl-Bzl), 2-chlorobenzyloxycarbonyl (2-Cl-Z), 2-bromobenzyloxycarbonyl (2-Br-Z), Benzyloxymethyl (Bom), t-butoxycarbonyl (Boc), cyclohexyloxy (cHxO),t-butoxymethyl (Bum), t-butoxy (tBuO), t-Butyl (tBu), Acetyl (Ac), a benzoyl group, a carbobenzoxy group, a propyl group, a butyl group, a pentyl group, a hexyl group group, and Trifluoroacetyl (TFA).

12. The polypeptide of claim 9, wherein said peptide comprises a protecting group coupled to the amino terminal and said amino terminal protecting group is a protecting group selected from the group consisting of a benzoyl group, an acetyl, a propeonyl, a carbobenzoxy, a propyl, a butyl, a pentyl, a hexyl, and a 3 to 20 carbon alkyl.

13. The polypeptide of claim 9, wherein said peptide comprises a protecting group coupled to the carboxyl terminal and said carboxyl terminal protecting group is an amide.

14. The polypeptide of claim 9, wherein said peptide further comprises:

a first protecting group coupled to the amino terminus wherein said protecting group is a protecting group selected from the group consisting of a benzoyl group, an acetyl, a propeonyl, a carbobenzoxy, a propyl, a butyl, a pentyl, a hexyl, and a 3 to 20 carbon alkyl; and

a second protecting group coupled to the carboxyl terminal and said carboxyl terminal protecting group is an amide.

15. The polypeptide of claim 2, wherein said peptide comprises a first protecting group coupled to the amino terminus and a second protecting group coupled to the carboxyl terminus.

16. The polypeptide of claim 2, wherein said peptide comprises an Ac group on the amino terminus.

17. The polypeptide of claim 2, wherein said peptide comprises an $--NH_2$ on the carboxyl terminus.

18. The polypeptide of claim 2, wherein said peptide comprises an Ac group on the amino terminus and an $--NH_2$ on the carboxyl terminus.

19. The polypeptide of claim 7, wherein said peptide comprises an Ac group on the amino terminus.

20. The polypeptide of claim 7, wherein said peptide comprises an $--NH_2$ on the carboxyl terminus.

21. The polypeptide of claim 7, wherein said peptide comprises an Ac group on the amino terminus and an --NH_2 on the carboxyl terminus.

22. The polypeptide of claim 2, wherein said peptide comprises a "D" amino acid.

23. The polypeptide of claim 2, wherein said peptide comprises a plurality of "D" amino acids.

24. The polypeptide of claim 2, wherein all enantiomeric amino acids comprising said peptide are "D" amino acids.

25. The polypeptide of claim 2, wherein said peptide is mixed with a pharmacologically acceptable excipient.

26. The polypeptide of claim 2, wherein said peptide is mixed with a pharmacologically acceptable excipient suitable for oral administration to a mammal.

27. The polypeptide of claim 6, wherein said oxidizing agent is selected from the group consisting of hydrogen peroxide, 13(S)-HPODE, 15(S)-HPETE, HPODE, HPETE, HODE, and HETE.

28. The polypeptide of claim 6, wherein said phospholipid is selected from the group consisting of 1-palmitoyl-2-arachidonoyl-sn-glycero-3-phosphorylcholine (PAPC), 1-stearoyl-2-arachidonoyl-sn-glycero-3-phosphorylcholine (SAPC)), 1-stearoyl-2-arachidonyl-sn-glycero-3-phosphorylethanolamine (SAPE).

29. The polypeptide of claim 1, wherein said polypeptide is coupled to a phospholipid.

30. The polypeptide of claim 29, wherein said polypeptide is covalently coupled to a phospholipid.

31. The polypeptide of claim 29, wherein said polypeptide is covalently coupled to a phospholipid comprising lysophosphatidyl choline.

32. The polypeptide of claim 29, wherein said polypeptide is covalently coupled to a phospholipid selected from the group consisting of propionoyl, butanoyl, pentanoyl, caproyl, heptanoyl, capryloyl, nonanoyl, capryl, undcanoyl, lauroyl, tridecanoyl, myristoyl, pentadecanoyl, palmitoyl, heptadecanoyl, stearoyl, nonadecanoyl, arachidoyl, heniecosanoyl, behenoyl, trucisanoyl, lignoceroyl, myristoleoyl (9-cis), myristelaidoyl (9-trans), palmitoleoyl (9-cis), palmitelaidoyl (9-trans).

33. The polypeptide of claim 32, wherein said polypeptide is covalently coupled to the sn-1 or sn-2 position of said phospholipid.

34. A composition suitable for oral administration that ameliorates a symptom of atherosclerosis, wherein said composition comprises a peptide comprising a amphipathic helix having charged residues on the polar face of the peptide and possessing a wide non-polar face, wherein said peptide comprises a D amino acid and said peptide is blocked at the amino terminus and the carboxyl terminus.

35. The composition of claim 34, wherein said peptide is at least 10 amino acids in length.

36. The composition of claim 35, wherein said peptide is about 40 or fewer peptides in length.

37. The composition of claim 35, wherein said peptide comprises a G* amphipathic helix.

38. The composition of claim 37, wherein said peptide shows greater than about 50% sequence identity with apo J.

39. The composition of claim 35, wherein said peptide protects a phospholipid against oxidation by an oxidizing agent.

40. The composition of claim 35, wherein said peptide comprises an amino acid sequence selected from the group consisting of LLEQLNEQFNWVSRLANLTQGE (SEQ ID NO:1), LLEQLNEQFNWVSRLANL (SEQ ID NO:2), NELQEMSNQGSKYVNKEIQNAVNGV (SEQ ID NO:3), IQNAVNGVKQIKTLIEKTNEE (SEQ ID NO:4),

RKTLLSNLEEAKKKKEDALNETRESETKLKEL (SEQ ID NO:5), PGVCNETMMALWEECK (SEQ ID NO:6), PCLKQTCMKFYARVCR (SEQ ID NO:7), ECKPCLKQTCMKFYARVCR (SEQ ID NO:8), LVGRQLEEFL (SEQ ID NO:9), MNGDRIDSLLEN (SEQ ID NO:10), QQTHMLDVMQD (SEQ ID NO:11), FSRASSIIDELFQD (SEQ ID NO:12), PFLEMIHEAQQAMDI (SEQ ID NO:13), PTEFIREGDDD (SEQ ID NO:14), RMKDQCDKCREILSV (SEQ ID NO:15), PSQAKLRRELDESLQVAERLTRKYNELLKSYQ (SEQ ID NO:16), LLEQLNEQFNWVSRLANLTEGE (SEQ ID NO:17), DQYYLRVTTVA (SEQ ID NO:18), PSGVTEVVVKLFDS (SEQ ID NO:19), PKFMETVAEKALQEYRKKHRE (SEQ ID NO:20), WDRVKDLATVYVDVLKDSGRDYVSQF (SEQ ID NO:21), VATVMWDYFSQLSNNAKEAVEHLQK (SEQ ID NO:22), RWELALGRFWDYLRWVQTLSEQVQEEL (SEQ ID NO:23), LSSQVTQELRALMDETMKELKELKAYKSELEEQLT (SEQ ID NO:24), ARLSKELQAAQARLGADMEDVCGRLV (SEQ ID NO:25), VRLASHLRKLRKRLLRDADDLQKRLA (SEQ ID NO:26), PLVEDMQRQWAGLVEKVQA (SEQ ID NO:27), MSTYTGIFTDQVLSVLK (SEQ ID NO:28), and LLSFMQGYMKHATKTAKDALSS (SEQ ID NO:29).

41. The composition of claim 35, wherein said first protecting group and said second protecting group are independently selected from the group consisting of an acetyl, amide, 3 to 20 carbon alkyl groups, Fmoc, *t*-boc, 9-fluoreneacetyl group, 1-fluorenecarboxylic group, 9-florenecarboxylic group, 9-fluorenone-1-carboxylic group, benzyloxycarbonyl, Xanthyl (Xan), Trityl (Trt), 4-methyltrityl (Mtt), 4-methoxytrityl (Mmt), 4-methoxy-2,3,6-trimethyl-benzenesulphonyl (Mtr), Mesitylene-2-sulphonyl (Mts), 4,4=-dimethoxybenzhydryl (Mbh),Tosyl (Tos), 2,2,5,7,8-pentamethyl chroman-6-sulphonyl (Pmc), 4-methylbenzyl (MeBzl), 4-methoxybenzyl (MeOBzl), Benzyloxy (BzlO), Benzyl (Bzl), Benzoyl (Bz), 3-nitro-2-pyridinesulphenyl (Npys), 1-(4,4-dimentyl-2,6-diaxocyclohexylidene)ethyl (Dde), 2,6-dichlorobenzyl (2,6-DiCl-Bzl), 2-chlorobenzyloxycarbonyl (2-Cl-Z), 2-bromobenzyloxycarbonyl (2-Br-Z), Benzyloxymethyl (Bom), t-butoxycarbonyl (Boc), cyclohexyloxy (cHxO),t-butoxymethyl (Bum), t-butoxy (tBuO), t-Butyl (tBu), Acetyl (Ac), a benzoyl group, a carbobenzoxy group, a propyl group, a butyl group, a pentyl group, a hexyl group group, and Trifluoroacetyl (TFA).

42. The composition of claim 35, wherein said first protecting group is an acetyl.

43. The composition of claim 35, wherein said second protecting group is an amide.

44. The composition of claim 35, wherein more than half of the enantiomeric amino acids comprising said peptide are D amino acids.

45. The composition of claim 35, wherein all enantiomeric amino acids comprising said peptide are D amino acids.

46. The composition of claim 35, wherein said composition further comprises a pharmaceutically acceptable excipient.

47. The composition of claim 46, wherein said excipient is an excipient suitable for oral administration.

48. The composition of claim 46, wherein said excipient is an excipient suitable for injection.

49. A pharmaceutical composition, said composition comprising a polypeptide of claim 1 in a pharmaceutically acceptable excipient.

50. The composition of claim 49, wherein said composition comprises a unit dosage formulation.

51. The composition of claim 35, wherein said polypeptide is coupled to a phospholipid.

52. The composition of claim 51, wherein said polypeptide is covalently coupled to a phospholipid.

53. The composition of claim 51, wherein said polypeptide is covalently coupled to a phospholipid comprising lysophosphatidyl choline.

54. The composition of claim 51, wherein said polypeptide is covalently coupled to a phospholipid selected from the group consisting of propionoyl,

butanoyl, pentanoyl, caproyl, heptanoyl, capryloyl, nonanoyl, capryl, undcanoyl, lauroyl, tridecanoyl, myristoyl, pentadecanoyl, palmitoyl, heptadecanoyl, stearoyl, nonadecanoyl, arachidoyl, heniecosanoyl, behenoyl, trucisanoyl, lignoceroyl, myristoleoyl (9-cis), myristelaidoyl (9-trans), palmitoleoyl (9-cis), palmitelaidoyl (9-trans).

55. A method of ameliorating a symptom of atherosclerosis in a mammal, said method comprising administering to said mammal a peptide or a concatamer of a peptide comprising an amphipathic helical peptide having charged residues on the polar face of the peptide and possessing a wide non-polar face.

56. The method of claim 55, wherein said peptide is at least 10 amino acids in length.

57. The method of claim 56, wherein said peptide is about 40 or fewer peptides in length.

58. The method of claim 56, wherein said peptide comprises a G* amphipathic helix.

59. The method of claim 58, wherein said peptide shows greater than about 50% sequence identity with apo J.

60. The method of claim 56, wherein said peptide protects a phospholipid against oxidation by an oxidizing agent.

61. The method of claim 56, wherein said peptide comprises an amino acid sequence selected from the group consisting of LLEQLNEQFNWVSRLANLTQGE (SEQ ID NO:1), LLEQLNEQFNWVSRLANL (SEQ ID NO:2), NELQEMSNQGSKYVNKEIQNAVNGV (SEQ ID NO:3), IQNAVNGVKQIKTLIEKTNEE (SEQ ID NO:4), RKTLLSNLEEAKKKKEDALNETRESETKLKEL (SEQ ID NO:5), PGVCNETMMALWEECK (SEQ ID NO:6), PCLKQTCMKFYARVCR (SEQ ID NO:7), ECKPCLKQTCMKFYARVCR (SEQ ID NO:8), LVGRQLEEFL (SEQ ID NO:9), MNGDRIDSLLEN (SEQ ID NO:10), QQTHMLDVMQD (SEQ ID NO:11), FSRASSIIDELFQD (SEQ ID NO:12), PFLEMIHEAQQAMDI (SEQ ID NO:13), PTEFIREGDDD (SEQ ID NO:14), RMKDQCDKCREILSV (SEQ ID NO:15),

PSQAKLRRELDESLQVAERLTRKYNELLKSYQ (SEQ ID NO:16), LLEQLNEQFNWVSRLANLTEGE (SEQ ID NO:17), DQYYLRVTTVA (SEQ ID NO:18), PSGVTEVVVKLFDS (SEQ ID NO:19), PKFMETVAEKALQEYRKKHRE (SEQ ID NO:20), WDRVKDLATVYVDVLKDSGRDYVSQF (SEQ ID NO:21), VATVMWDYFSQLSNNAKEAVEHLQK (SEQ ID NO:22), RWELALGRFWDYLRWVQTLSEQVQEEL (SEQ ID NO:23), LSSQVTQELRALMDETMKELKELKAYKSELEEQLT (SEQ ID NO:24), ARLSKELQAAQARLGADMEDVCGRLV (SEQ ID NO:25), VRLASHLRKLRKRLLRDADDLQKRLA (SEQ ID NO:26), PLVEDMQRQWAGLVEKVQA (SEQ ID NO:27), MSTYTGIFTDQVLSVLK (SEQ ID NO:28), and LLSFMQGYMKHATKTAKDALSS (SEQ ID NO:29).

62. The method of claim 61, wherein said peptide is a concatamer of two or more of said amino acid sequences.

63. The method of claim 56, wherein said peptide further comprises a protecting group.

64. The method of claim 56, wherein said peptide further comprises a protecting group coupled to the amino or carboxyl terminus.

65. The method of claim 63, wherein said protecting group is a protecting group selected from the group consisting of acetyl, amide, 3 to 20 carbon alkyl groups, Fmoc, *t*-boc, 9-fluoreneacetyl group, 1-fluorenecarboxylic group, 9-florenecarboxylic group, 9-fluorenone-1-carboxylic group, benzyloxycarbonyl, Xanthyl (Xan), Trityl (Trt), 4-methyltrityl (Mtt), 4-methoxytrityl (Mmt), 4-methoxy-2,3,6-trimethyl-benzenesulphonyl (Mtr), Mesitylene-2-sulphonyl (Mts), 4,4=-dimethoxybenzhydryl (Mbh),Tosyl (Tos), 2,2,5,7,8-pentamethyl chroman-6-sulphonyl (Pmc), 4-methylbenzyl (MeBzl), 4-methoxybenzyl (MeOBzl), Benzyloxy (BzlO), Benzyl (Bzl), Benzoyl (Bz), 3-nitro-2-pyridinesulphenyl (Npys), 1-(4,4-dimentyl-2,6-diaxocyclohexylidene)ethyl (Dde), 2,6-dichlorobenzyl (2,6-DiCl-Bzl), 2-chlorobenzyloxycarbonyl (2-Cl-Z), 2-bromobenzyloxycarbonyl (2-Br-Z), Benzyloxymethyl (Bom), t-butoxycarbonyl (Boc), cyclohexyloxy (cHxO),t-butoxymethyl (Bum), t-butoxy (tBuO), t-Butyl (tBu), Acetyl (Ac), a benzoyl group, a carbobenzoxy

group, a propyl group, a butyl group, a pentyl group, a hexyl group group, and Trifluoroacetyl (TFA).

66. The method of claim 63, wherein said peptide comprises a protecting group coupled to the amino terminal and said amino terminal protecting group is a protecting group selected from the group consisting of a benzoyl group, an acetyl, a propeonyl, a carbobenzoxy, a propyl, a butyl, a pentyl, a hexyl, and a 3 to 20 carbon alkyl.

67. The method of claim 63, wherein said peptide comprises a protecting group coupled to the carboxyl terminal and said carboxyl terminal protecting group is an amide.

68. The method of claim 63, wherein said peptide further comprises:

a first protecting group coupled to the amino terminus wherein said protecting group is a protecting group selected from the group consisting of a benzoyl group, an acetyl, a propeonyl, a carbobenzoxy, a propyl, a butyl, a pentyl, a hexyl, and a 3 to 20 carbon alkyl; and

a second protecting group coupled to the carboxyl terminal and said carboxyl terminal protecting group is an amide.

69. The method of claim 56, wherein said peptide comprises a first protecting group coupled to the amino terminus and a second protecting group coupled to the carboxyl terminus.

70. The method of claim 56, wherein said peptide comprises an Ac group on the amino terminus.

71. The method of claim 56, wherein said peptide comprises an --NH_2 on the carboxyl terminus.

72. The method of claim 56, wherein said peptide comprises an Ac group on the amino terminus and an --NH_2 on the carboxyl terminus.

73. The method of claim 61, wherein said peptide comprises an Ac group on the amino terminus.

74. The method of claim 61, wherein said peptide comprises an --NH_2 on the carboxyl terminus.

75. The method of claim 61, wherein said peptide comprises an Ac group on the amino terminus and an --NH_2 on the carboxyl terminus.

76. The method of claim 56, wherein said peptide comprises a "D" amino acid.

77. The method of claim 56, wherein said peptide comprises a plurality of "D" amino acids.

78. The method of claim 56, wherein all enantiomeric amino acids comprising said peptide are "D" amino acids.

79. The method of claim 56, wherein said polypeptide is coupled to a phospholipid.

80. The method of claim 79, wherein said polypeptide is covalently coupled to a phospholipid.

81. The method of claim 79, wherein said polypeptide is covalently coupled to a phospholipid comprising lysophosphatidyl choline.

82. The method of claim 79, wherein said polypeptide is covalently coupled to a phospholipid selected from the group consisting of propionoyl, butanoyl, pentanoyl, caproyl, heptanoyl, capryloyl, nonanoyl, capryl, undcanoyl, lauroyl, tridecanoyl, myristoyl, pentadecanoyl, palmitoyl, heptadecanoyl, stearoyl, nonadecanoyl, arachidoyl, heniecosanoyl, behenoyl, trucisanoyl, lignoceroyl, myristoleoyl (9-cis), myristelaidoyl (9-trans), palmitoleoyl (9-cis), palmitelaidoyl (9-trans).

83. The method of claim 56, wherein said peptide is mixed with a pharmacologically acceptable excipient.

84. The method of claim 56, wherein said peptide is mixed with a pharmacologically acceptable excipient suitable for oral administration to a mammal.

85. The method of claim 55, wherein said administering comprises orally administering said peptide.

86. The method of claim 55, wherein said mammal is a mammal diagnosed as having one or more symptoms of atherosclerosis.

87. The method of claim 55, wherein said organism is a mammal diagnosed as at risk for atherosclerosis.

88. The method of claim 55, wherein said mammal is a human.

89. The method of claim 55, wherein said mammal is non-human mammal.

90. A method of ameliorating a symptom of a pathology characterized by an inflammatory response, said method comprising administering to said mammal a peptide or a concatamer of a peptide comprising an amphipathic helical peptide having charged residues on the polar face of the peptide and possessing a wide non-polar face.

91. The method of claim 90, wherein said peptide is at least 10 amino acids in length.

92. The method of claim 91, wherein said peptide is about 40 or fewer peptides in length.

93. The method of claim 91, wherein said peptide comprises a G* amphipathic helix.

94. The method of claim 93, wherein said peptide shows greater than about 50% sequence identity with apo J.

95. The method of claim 91, wherein said peptide protects a phospholipid against oxidation by an oxidizing agent.

96. The method of claim 91, wherein said peptide comprises an amino acid sequence selected from the group consisting of LLEQLNEQFNWVSRLANLTQGE (SEQ ID NO:1), LLEQLNEQFNWVSRLANL (SEQ ID NO:2),

NELQEMSNQGSKYVNKEIQNAVNGV (SEQ ID NO:3),
IQNAVNGVKQIKTLIEKTNEE (SEQ ID NO:4),
RKTLLSNLEEAKKKKEDALNETRESETKLKEL (SEQ ID NO:5),
PGVCNETMMALWEECK (SEQ ID NO:6), PCLKQTCMKFYARVCR (SEQ ID NO:7),
ECKPCLKQTCMKFYARVCR (SEQ ID NO:8), LVGRQLEEFL (SEQ ID NO:9),
MNGDRIDSLLEN (SEQ ID NO:10), QQTHMLDVMQD (SEQ ID NO:11),
FSRASSIIDELFQD (SEQ ID NO:12), PFLEMIHEAQQAMDI (SEQ ID NO:13),
PTEFIREGDDD (SEQ ID NO:14), RMKDQCDKCREILSV (SEQ ID NO:15),
PSQAKLRRELDESLQVAERLTRKYNELLKSYQ (SEQ ID NO:16),
LLEQLNEQFNWVSRLANLTEGE (SEQ ID NO:17), DQYYLRVTTVA (SEQ ID NO:18), PSGVTEVVVKLFDS (SEQ ID NO:19), PKFMETVAEKALQEYRKKHRE (SEQ ID NO:20), WDRVKDLATVYVDVLKDSGRDYVSQF (SEQ ID NO:21), VATVMWDYFSQLSNNAKEAVEHLQK (SEQ ID NO:22),
RWELALGRFWDYLRWVQTLSEQVQEEL (SEQ ID NO:23),
LSSQVTQELRALMDETMKELKELKAYKSELEEQLT (SEQ ID NO:24),
ARLSKELQAAQARLGADMEDVCGRLV (SEQ ID NO:25),
VRLASHLRKLRKRLLRDADDLQKRLA (SEQ ID NO:26),
PLVEDMQRQWAGLVEKVQA (SEQ ID NO:27), MSTYTGIFTDQVLSVLK (SEQ ID NO:28), and LLSFMQGYMKHATKTAKDALSS (SEQ ID NO:29).

97. The method of claim 91, wherein said organism is an organism diagnosed as having one or more symptoms of an inflammatory response.

98. The method of claim 91, wherein said organism is an organism diagnosed as at risk for a pathology associated with an inflammatory response.

99. The method of claim 91, wherein said organism is a human.

100. The method of claim 91, wherein said organism is non-human mammal.

101. A kit for ameliorating a symptom of atherosclerosis, said kit comprising a container containing a polypeptide of any one of claims 1 through 28.

102. The kit of claim 101, wherein said peptide is combined with a pharmaceutically acceptable excipient.

103. The kit of claim 101, wherein said peptide is combined with a pharmaceutically acceptable excipient in a unit dosage formulation.

104. The kit of claim 103, wherein said unit dosage formulation is for oral administration.

105. The kit of claim 101, further comprising instructional materials teaching the use of said peptide for ameliorating one or more symptoms of atherosclerosis or of a pathology characterized by an inflammatory response.

106. A method of mitigating or preventing a coronary complication associated with an acute phase response to an inflammation in a mammal, wherein said coronary complication is a symptom of atherosclerosis, said method comprising administering to a mammal having said acute phase response, or at risk for said acute phase response, a polypeptide of any one of claims 1 through 28.

107. The method of claim 106, where said administration is by a route selected from the group consisting of oral administration, nasal administration, rectal administration, intraperitoneal injection, and intravascular injection, subcutaneous injection, transcutaneous administration, and intramuscular injection.

108. The method of claim 106, wherein said polypeptide is administered in combination with an all L-form of the same polypeptide.

109. The method of claim 106, wherein said polypeptide is provided as a unit formulation in a pharmaceutically acceptable excipient.

110. The method of claim 106, wherein said acute phase response is an inflammatory response associated with a recurrent inflammatory disease.

111. The method of claim 107, wherein said acute phase response is associated with a disease selected from the group consisting of leprosy, tuberculosis, systemic lupus erythematosus, polymyalgia rheumatica, polyarteritis nodosa, scleroderma, idiopathic pulmonary fibrosis, chronic obstructive pulmonary disease, Alzheimers Disease

and AIDS, polymyalgia rheumatica, polyarteritis nodosa, scleroderma, idiopathic pulmonary fibrosis, chronic obstructive pulmonary disease, Alzheimers Disease, AIDS, coronary calcification, calcific aortic stenosis, osteoporosis, and rheumatoid arthritis.

112. The method of claim 106, wherein said acute phase response is an inflammatory response associated with a condition selected from the group consisting of a bacterial infection, a viral infection, a fungal infection, an organ transplant, a wound, an implanted prosthesis, parasitic infection, sepsis, endotoxic shock syndrome, and biofilm formation.

113. A method of mitigating or preventing a coronary complication associated with an acute phase response to an inflammation in a mammal, wherein said coronary complication is a symptom of atherosclerosis, said method comprising:

assaying said mammal for an acute phase protein (APP) level indicative of an acute phase response or a significant risk of an acute phase response; and

administering to a mammal showing an acute phase protein (APP) level indicative of an acute phase response a polypeptide of any one of claims 1 through 28.

114. The method of claim 113, wherein said acute phase protein (APP) is a postive APR selected from the group consisting of serum amyloid A, c-reactive protein, serum amyloid P component, C2 complement protein, C3 complement protein, C4 complement protein, C5 complement protein, C9 complement protein, B complement protein, C1 inhibitor, C4 binding protein, fibrinogen, von Willebrand factor, α1-antitrypsin, α1-antichymotrypsin, α2 antiplasmin, heparin cofactor II, plasminogen activator inhibitor I, haptoglobin, haemopexin, ceruloplasmin , manganese superoxide dismutase, α1-acid glycoprotein, haeme oxygenase, mannose binding protein, leukocyte protein I, lipoprotein (a), and lipopolysaccharide binding protein.

115. The method of claim 113, wherein said acute phase protein (APP) is a negative APR selected from the group consisting of albumin, prealbumin, transferin, apoAI, apoAII, α2-HS glycoprotein, inter-α-trypsin inhibitor, histidine rich glycoprotein.